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Nata

LumCAT: 1676-A
Luminaire: 92.70.046.00+92.70.147.00
Report No: NT2017092517
Test No: GC2017092517
LampCAT: CREE CXA1512
Lamp flux(lm): 1378.0
Number of Lamps: 1
Length(mm): 46
Phm Type: C

Voltage(V):
Current(A):
Power (W): 11.1900
PF:
Ballast type:
Width(mm): 46
Height(mm): 0

Photometric Results

Lumens(lm): 1182.14
Efficiency(%): 85.79%
Lumens(lm)/Power(W): 105.64
Central intensity(cd): 5579.278
Maximum intensity(cd): 5579.278
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=20.1
 [C90/270]Total=20.1
Field angle(10%Imax): [C0/180]Total=43.9
 [C90/270]Total=43.9
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.35 C90_270=0.35
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 85.79%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.525%

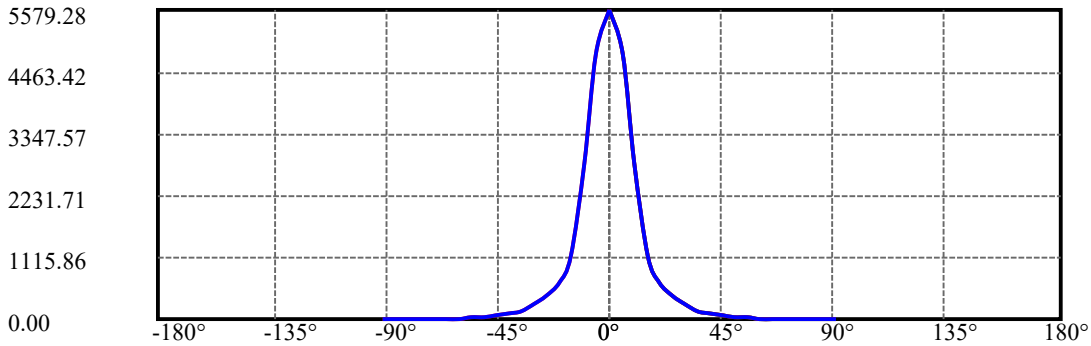
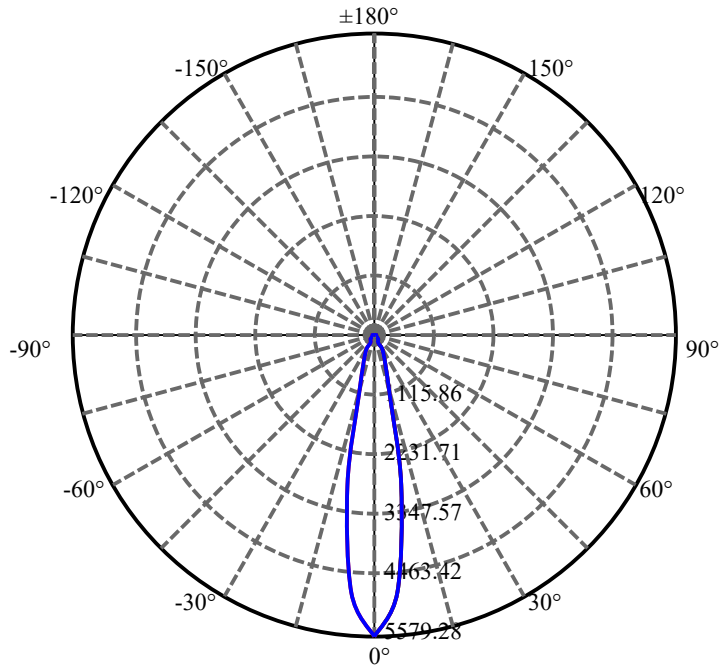
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5579.278	0.000	0	.000%	.000%
5.0	4774.216	123.773	123.773	8.982%	10.470%
10.0	2807.119	271.208	394.981	19.681%	33.412%
15.0	1142.833	234.309	629.29	17.004%	53.233%
20.0	645.419	147.377	776.667	10.695%	65.700%
25.0	422.985	112.056	888.723	8.132%	75.179%
30.0	276.927	88.574	977.297	6.428%	82.672%
35.0	153.566	63.393	1040.69	4.600%	88.034%
40.0	95.447	41.546	1082.236	3.015%	91.549%
45.0	58.828	28.565	1110.801	2.073%	93.965%
50.0	37.810	19.527	1130.329	1.417%	95.617%
55.0	26.455	13.973	1144.302	1.014%	96.799%
60.0	10.681	8.584	1152.886	.623%	97.525%
65.0	8.548	4.674	1157.56	.339%	97.921%
70.0	8.727	4.374	1161.934	.317%	98.291%
75.0	11.060	5.172	1167.106	.375%	98.728%
80.0	10.371	5.734	1172.84	.416%	99.213%
85.0	9.559	5.416	1178.255	.393%	99.671%
90.0	4.632	3.886	1182.141	.282%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	977.30	70.92%	82.67%
0-40	1082.24	78.54%	91.55%
0-60	1152.89	83.66%	97.53%
0-90	1178.26	85.50%	99.67%
0-120	1178.26	85.50%	99.67%
0-180	1182.14	85.79%	100.00%
60-90	33.95	2.46%	2.87%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.22	945.71	68.63%	80.00%

ZONAL LUMEN SUMMARY

0-10	394.98
10-20	381.69
20-30	200.63
30-40	104.94
40-50	48.09
50-60	22.56
60-70	9.05
70-80	10.91
80-90	5.42
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



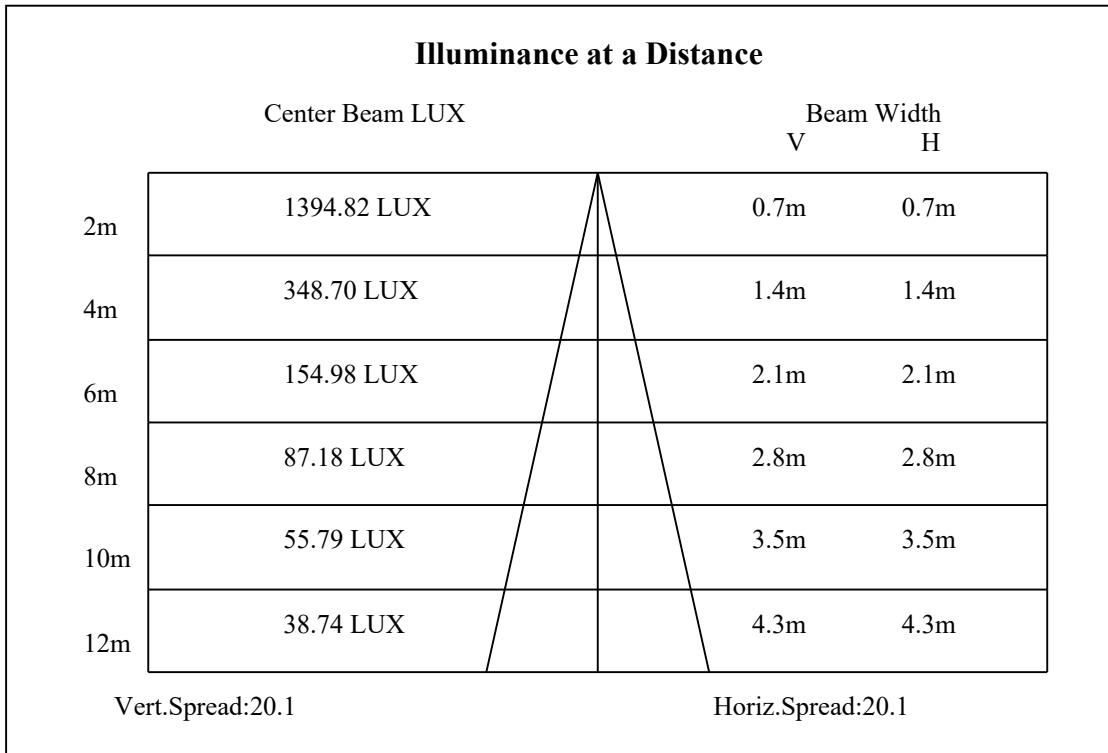
C0(Max): —————

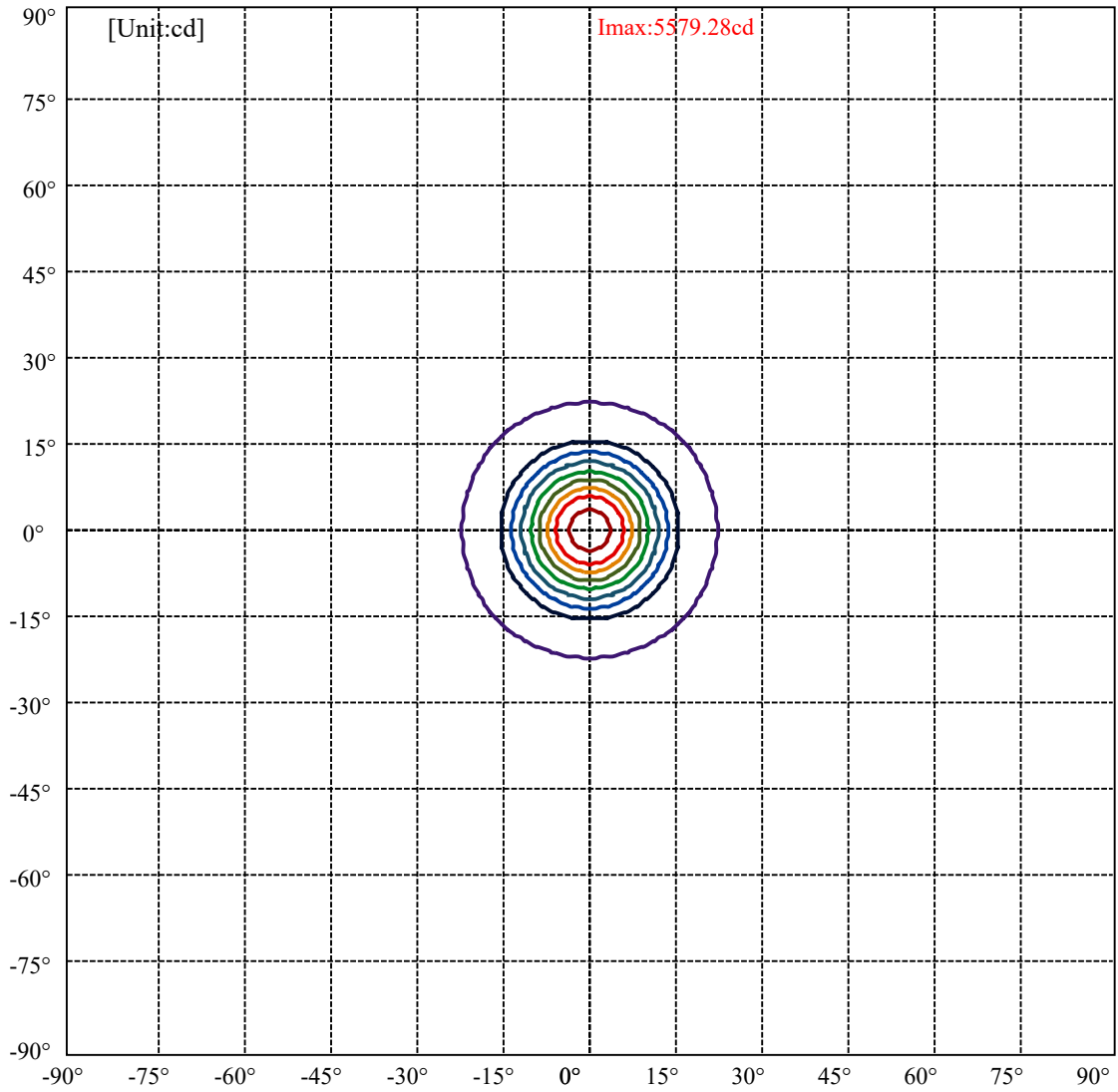
C0/C180: —————

C90/C270: —————

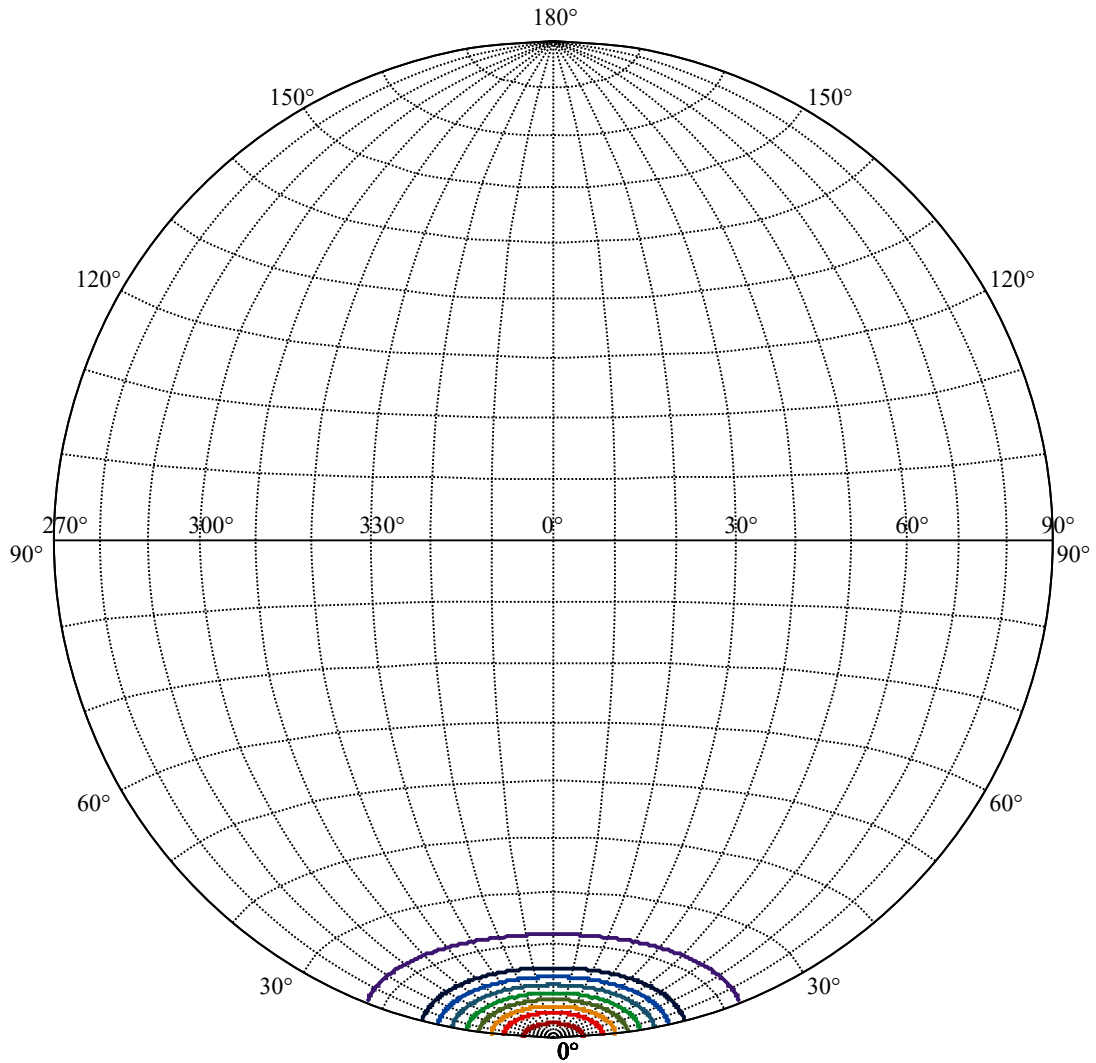
Field angle(10%Imax):C0/180Left:22.0 Right:22.0
:C90/270Left:22.0 Right:22.0

Beam Angle(50%Imax):C0/180Left:10.1 Right:10.1
:C90/270Left:10.1 Right:10.1





(10%Imax) 557.928	—
(20%Imax) 1115.86	—
(30%Imax) 1673.78	—
(40%Imax) 2231.71	—
(50%Imax) 2789.64	—
(60%Imax) 3347.57	—
(70%Imax) 3905.49	—
(80%Imax) 4463.42	—
(90%Imax) 5021.35	—



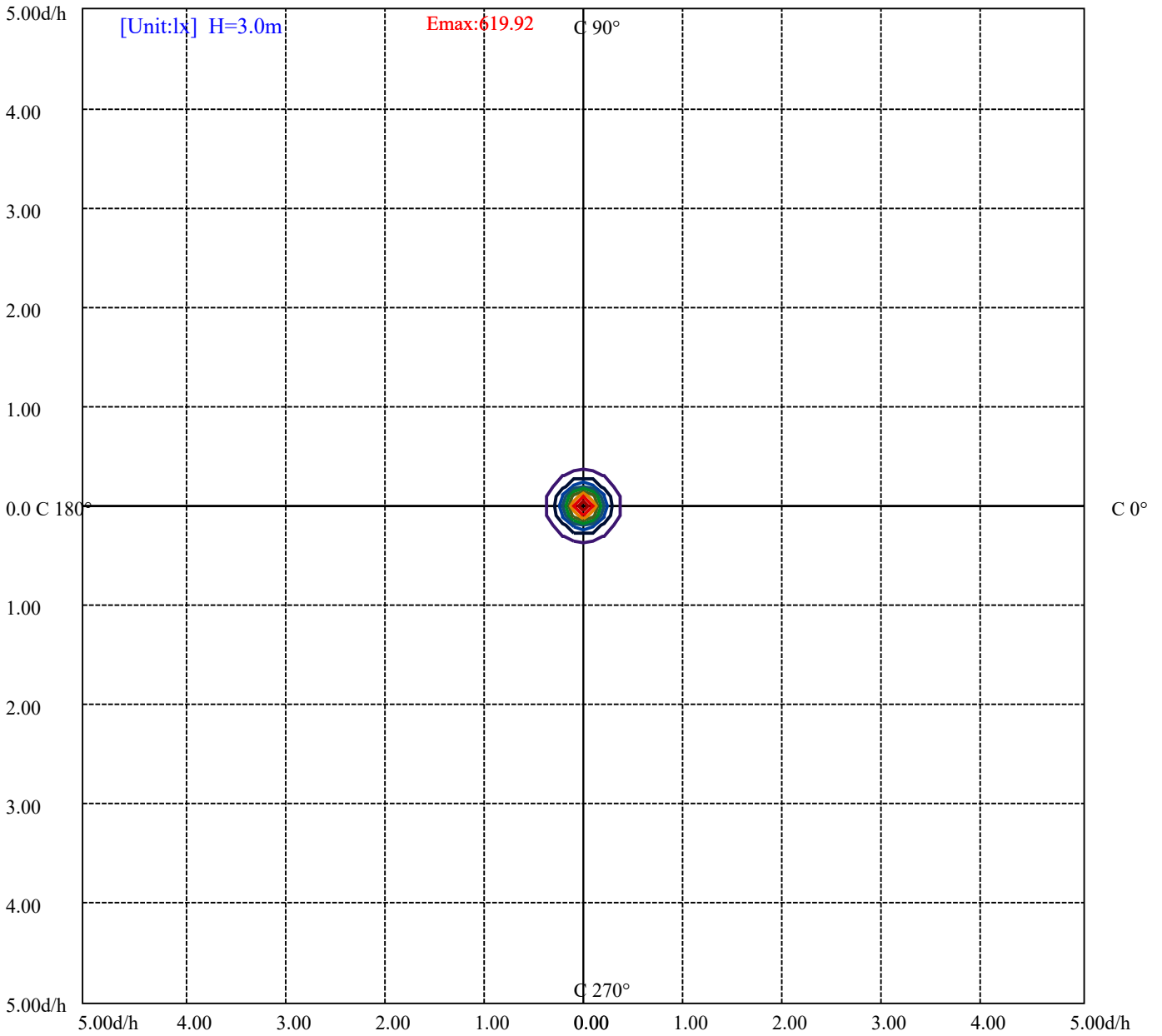
House

[Unit:cd]

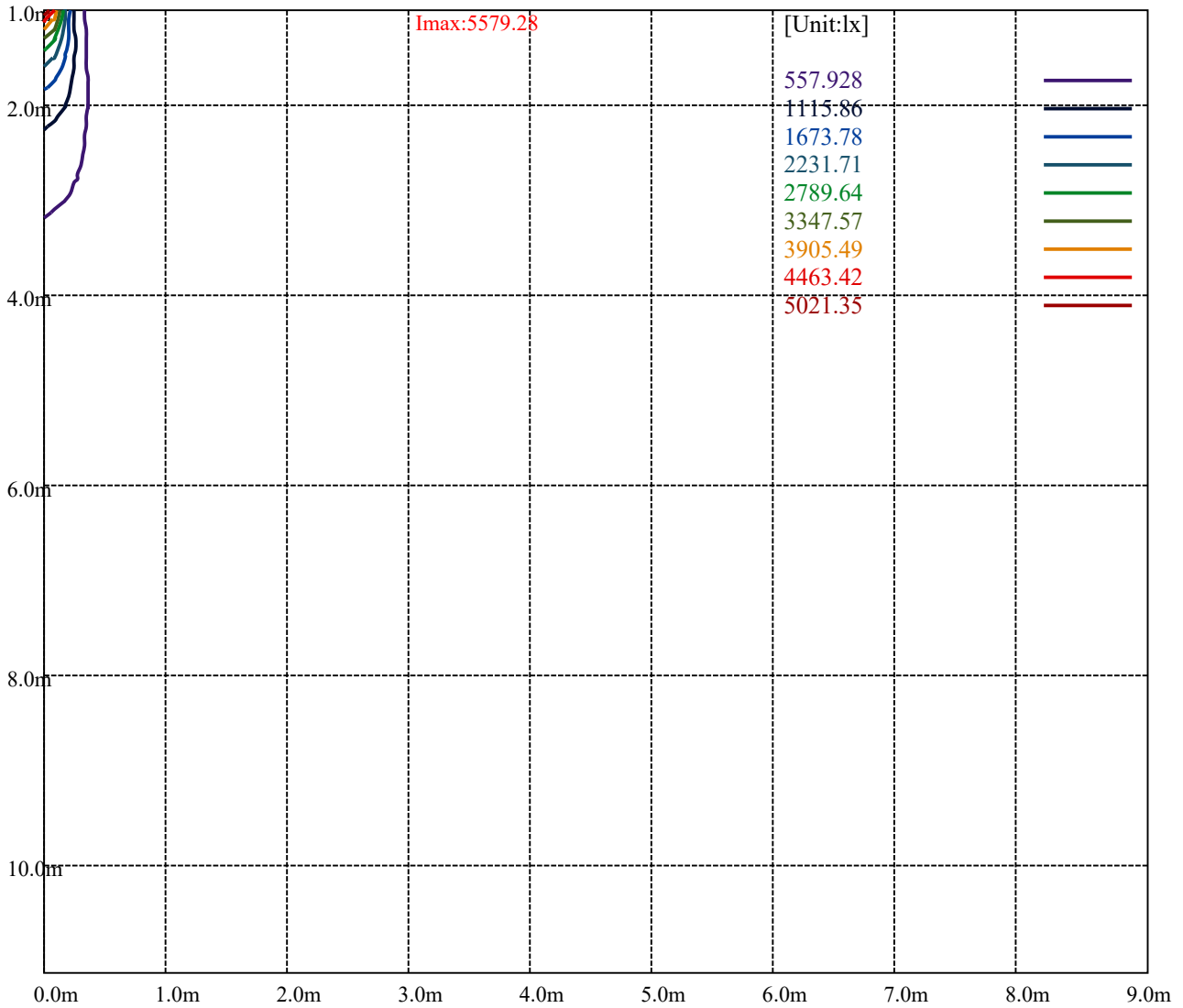
Road

Imax:5579.28

(10%Imax) 557.928	—
(20%Imax) 1115.86	—
(30%Imax) 1673.78	—
(40%Imax) 2231.71	—
(50%Imax) 2789.64	—
(60%Imax) 3347.57	—
(70%Imax) 3905.49	—
(80%Imax) 4463.42	—
(90%Imax) 5021.35	—



(10%E _{max}) 61.99166	—
(20%E _{max}) 123.9833	—
(30%E _{max}) 185.9756	—
(40%E _{max}) 247.9667	—
(50%E _{max}) 309.9589	—
(60%E _{max}) 371.95	—
(70%E _{max}) 433.9422	—
(80%E _{max}) 495.9333	—
(90%E _{max}) 557.9255	—



Luminance Table

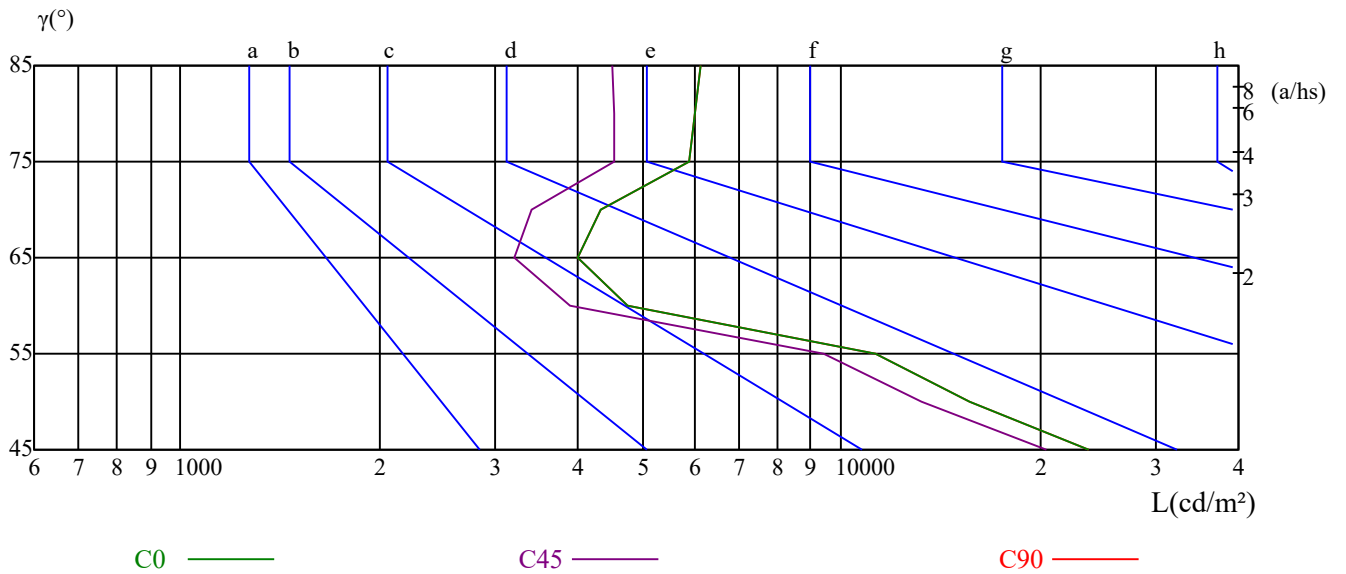
γ	45	50	55	60	65	70	75	80	85
C0	23797	15642	11285	4740	3985	4319	5881	6007	6131
C45	20453	13243	9407	3887	3210	3412	4546	4530	4491
C90	23797	15642	11285	4740	3985	4319	5881	6007	6131

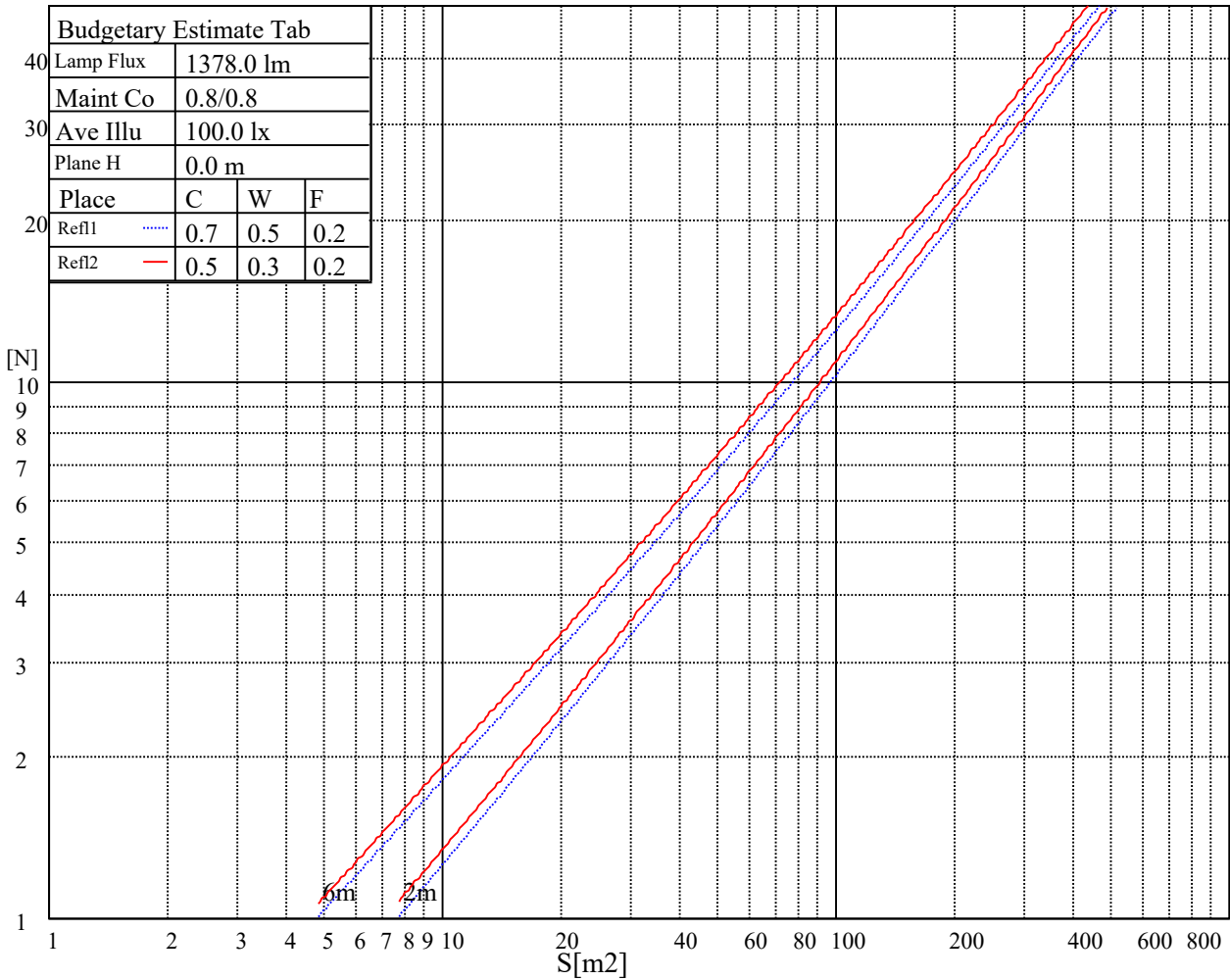
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9558	9558	9558	20194	20194	20194	51833	51833	51833

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.02	1.02	1.02	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.88	0.88	0.88	0.86
1	0.96	0.94	0.92	0.94	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.83	0.81
2	0.90	0.87	0.85	0.89	0.86	0.84	0.86	0.84	0.82	0.83	0.82	0.80	0.81	0.80	0.78	0.77
3	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.73
4	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.70
5	0.78	0.74	0.71	0.77	0.73	0.70	0.76	0.72	0.70	0.74	0.71	0.69	0.73	0.70	0.68	0.67
6	0.75	0.70	0.67	0.74	0.70	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.66	0.63	0.62
8	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.60
9	0.67	0.63	0.60	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.64	0.61	0.59	0.58
10	0.65	0.61	0.58	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.57	0.57

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	5575.56	5040.41	3176.20	1335.67	698.12	432.19	280.24	157.30	99.21
45.0	5595.38	4658.32	2665.28	1051.03	574.24	372.73	279.69	133.62	85.12
90.0	5543.08	4249.25	2239.69	897.53	525.62	358.86	208.39	121.23	75.65
135.0	5603.09	4611.52	2741.26	1157.29	621.59	421.18	281.89	147.00	94.20
180.0	5575.56	4533.34	2403.76	1026.91	605.62	407.42	258.44	150.30	93.21
225.0	5595.38	4891.21	2813.38	1056.53	684.13	452.34	280.62	170.07	104.72
270.0	5543.08	5218.80	3430.56	1564.70	780.70	500.46	339.15	188.02	112.59
315.0	5603.09	4990.86	2986.81	1053.01	673.34	438.69	287.01	160.99	98.88
360.0	5575.56	5040.41	3176.20	1335.67	698.12	432.19	280.24	157.30	99.21
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	63.70	39.81	29.07	13.32	8.53	8.48	9.47	10.02	9.19
45.0	52.14	34.08	26.70	9.86	8.64	8.81	10.13	10.68	9.80
90.0	45.15	30.94	23.56	8.26	8.31	8.53	13.16	10.79	10.13
135.0	56.21	36.23	24.12	8.59	8.26	8.42	13.76	8.42	8.48
180.0	57.04	37.82	23.89	9.14	9.19	9.69	12.33	11.07	9.86
225.0	64.03	41.68	27.31	10.19	8.92	9.25	10.74	10.74	9.31
270.0	69.10	41.90	29.18	14.70	8.09	8.04	8.37	10.02	9.08
315.0	63.26	40.03	27.80	11.40	8.42	8.59	10.52	11.23	10.63
360.0	63.70	39.81	29.07	13.32	8.53	8.48	9.47	10.02	9.19
C/γ(°)	90.0								
0.0	4.68								
45.0	4.57								
90.0	4.63								
135.0	4.63								
180.0	4.68								
225.0	4.57								
270.0	4.63								
315.0	4.68								
360.0	4.68								